Section G
Spent Nuclear Fuel

PROJECT MANAGERS
S.J. Veitenheimer, RL
(509) 373-9725

R.B. Heck, FH
(509) 373-0500

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INTRODUCTION

The Spent Nuclear Fuel (SNF) Project consists of Project Baseline Summary (PBS) RL-RS03, Work Breakdown Structure (WBS) 3.2.3.

NOTE: Unless otherwise noted, all information contained herein is as of the end of March 2002.

Fiscal year (FY) to date milestone performance (EA, HQ, and RL) shows one milestone overdue and one milestone on schedule.

NOTABLE ACCOMPLISHMENTS

Fuel Movement Activities — Activities included:

- During this reporting period, six Multi-Canister Overpacks (MCOs) containing 28.01 Metric Tons of Heavy Metal (MTHM) were shipped from K West (KW) (53 MCOs and 248.56 MTHMs, cumulatively contract to date). To date, the Spent Nuclear Fuel (SNF) Project is 38 working days (18 MCOs, 84.18 MTHM) behind the baseline schedule commitment to move 720.1 MTHM by the end of fiscal year (FY) 2002.
- Developed Fuel Transfer System (FTS) operations procedures and approved Activity Readiness Plan.

Facility Activities — Activities included:

- The Canister Storage Building (CSB) completed all MCO Sampling dry runs.

FTS Construction — Activities included:

- One shipping cask and two trailers have been received and are transportation ready.
- Nearing completion of KE and KW FTS Annex construction.
- Completed fabrication of the FTS lift tables, straddle carriers, and rail systems in both basins.
- Began installation of in-basin equipment (both basins).
- Completed Factory Acceptance Testing (FAT) of Cask (Tacoma, Washington) and started installation of Transfer System Equipment for FAT (Ogden, Utah).

Sludge Water System— Activities included:

- Completed 90 percent design packages for KE in-basin equipment and sludge transportation system cask.
- Resolved nuclear safety issues associated with sludge container design.

Sludge Handling Modification Activities — Activities included:

- Took delivery of the first set of secondary containment/rack system and leveling frame, work platform, sump pump supports, leak detector supports, work platform, load cell lifting device and support from Monarch Machine.
- Completed modifications to the auxiliary 10-ton crane at T Plant needed to support construction activities. Successfully performed load test of the crane.
- Issued a draft Waste Acceptance Criteria for the Storage of KE Basin Sludge at T Plant for review.

NOTABLE ACCOMPLISHMENTS (CONTINUED)

Site-Wide Activities — Activities included:

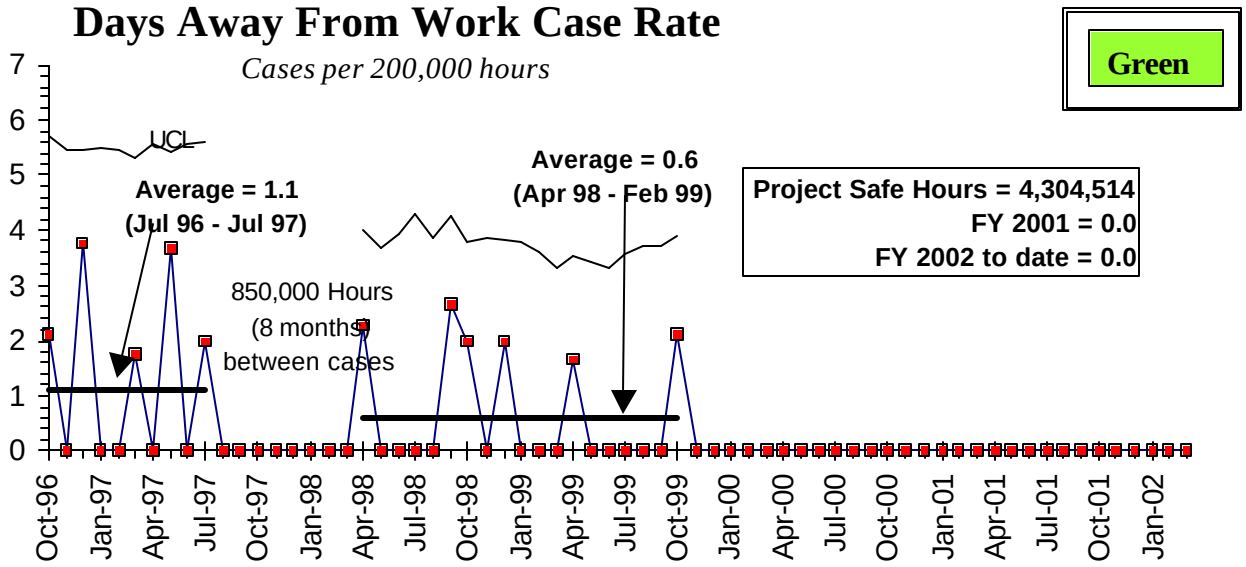
- Received four liners and levelers for T-Plant dry storage cells for sludge storage.
- Completing preparation for receipt of Training, Research and Isotope Production, General Atomics (TRIGA) fuel at the Interim Storage Area (ISA) Pad in May 2002.
- Continued preparation with the Waste Management Project for Shippingport Pressurized Water Reactor Core 2 SNF removal and receipt at the CSB.

Canister Cleaner Operations — Activities included:

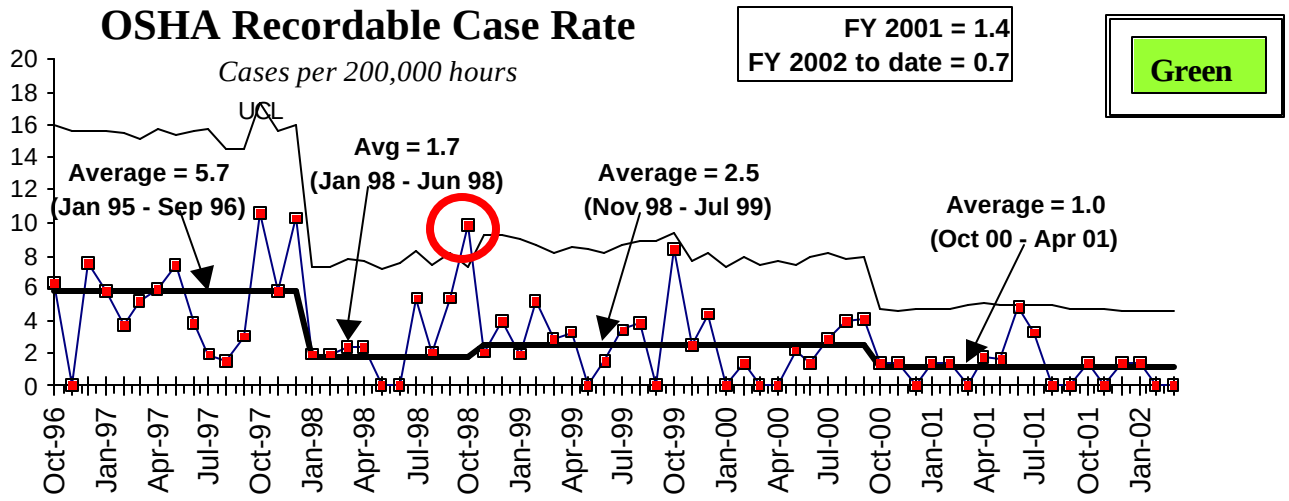
- Initiated canister cleaner operations. Removed 52 canisters and prepared for shipment and disposal.

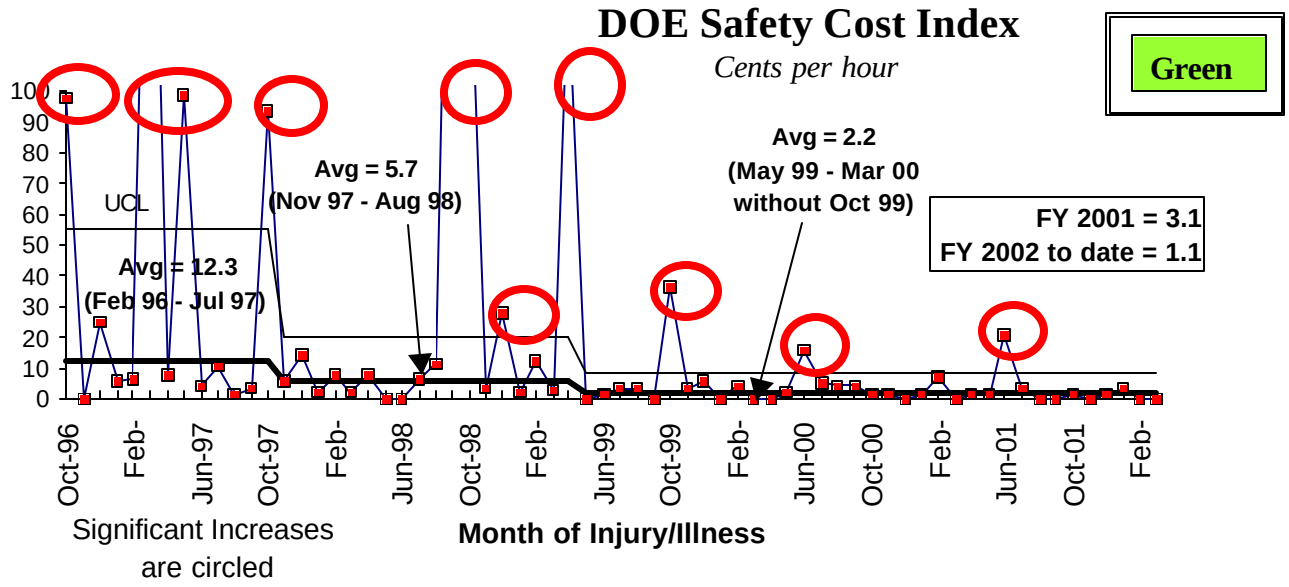
SAFETY

No Lost Away Workday injuries were reported within the SNF Project, thus allowing an achievement of more than 4.3 million safe work hours by the end of March 2002. This performance can be attributed to the effective implementation of the Integrated Safety Management (ISM) System core functions of management commitment and worker involvement.

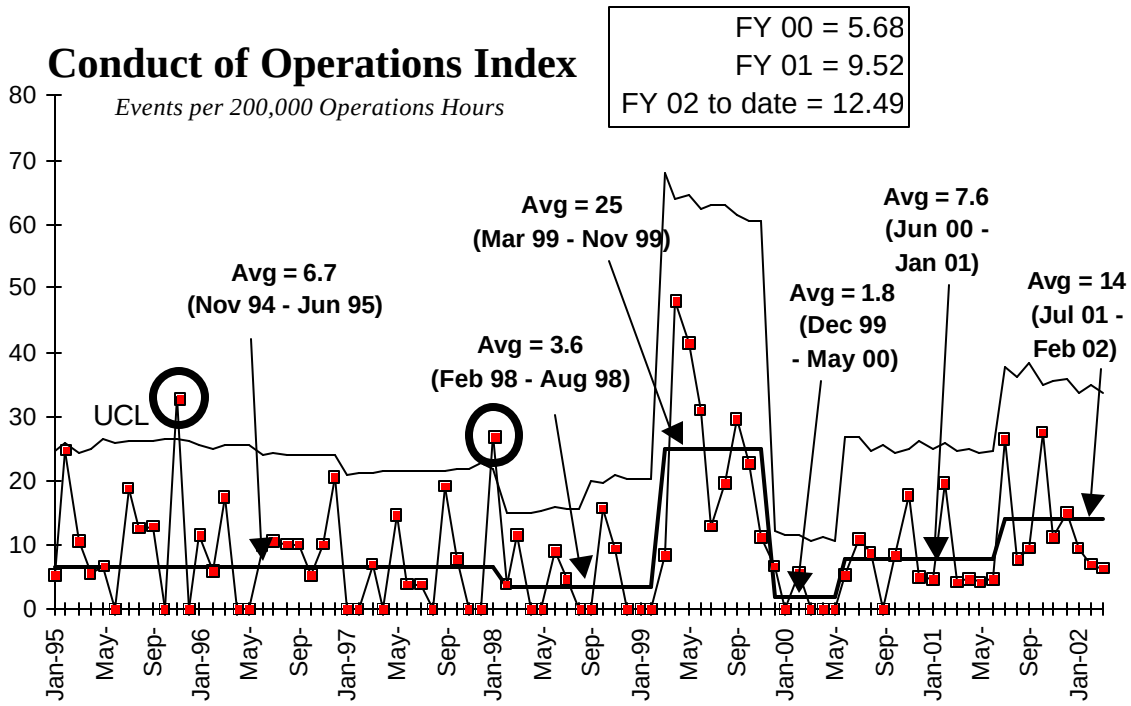


SAFETY (CONTINUED)





Conduct of Operations



In an effort to raise the Project's focus on worker safety and conduct of operations, a weekly review of lessons learned and occurrence reports is conducted at the opening of the SNF Project senior staff meeting. The project continues to emphasize worker safety and conduct of operations with all project personnel. The SNF Project is updating the Conduct of Operations Applicability Matrix. Two additional assessments were completed: the first is on Interlocks and their potential impact, and the second on CONOPs. When appropriate, disciplinary actions are taken. A CONOPs improvement plan with actions is currently being prepared.

Breakthroughs / Opportunities for Improvement

Breakthroughs

Stinger Redesign — The stingers used on the manipulators had a failure rate of only 1.75 MCOs of fuel processed. Cooperation between SNF Project Engineers and the engineering lab has led to a modified stinger design that results in a life extension of five to six times the original rate, and about a one million dollar cost avoidance just for parts (not counting production interruptions).

End of Batch Elimination — Successful agreement with DOE-RL has led to the elimination of the "End-of Batch". This action has reduced the production time for "fuel into baskets" by about ten percent or four hours per MCO.

Breakthroughs / Opportunities for Improvement (Continued)

Opportunities for Improvement

SNF Project Equipment Reliability / KW Fuel Production — Equipment reliability continues to be a major factor in the production and processing of fuel at KW. The current average processing time is 64.1 working hours, 19.1 working hours over the required target processing time of 45 working hours. Process improvements are being implemented. The equipment reliability issue is being addressed through the SNF Project Availability Assessment Document (SNF-9273). This assessment plan was presented to DOE-HQ EM-40 representatives and provides a plan of action to solving the equipment reliability. Ninety-five percent of the spares identified during the assessment have been integrated into the SNF Spare Parts program.

Flowmeter — SNF engineers have identified the replacement of the magnetic flowmeter to an ultrasonic flowmeter used for the P-2 pump. This will allow the production to regain wash time by reducing it from 15 minutes to between five and ten minutes in the Primary Clean Machine (PCM). This replacement and testing is expected to be complete by the middle of May 2002.

Upcoming Activities

Fuel Movement — Continue removal and processing of SNF.

Fuel Movement — Continue implementing process improvements to decrease time necessary to load and process fuel in MCOs.

ISA Readiness Assessment — Conduct 200 Area ISA Readiness Assessment starting April 22, 2002.

ISA Pad Fuel Receipt — Initiate Neutron Radiography Facility (NRF) TRIGA fuel transfer to 200 Area ISA Pad in May 2002.

SWS Design — Complete SWS design in May 2002.

FTS Construction — Complete fabrication of FTS equipment for KE and KW Basins by May 1, 2002.

SWS Construction — Begin fabrication of SWS KE in-basin equipment by May 15, 2002.

SWS Construction — Release contract for SWS in-basin equipment by May 15, 2002.

FTS Construction — Complete FTS construction acceptance testing by June 1, 2002.

SWS Construction — Receive cask and container for sludge in August 2002.

SWS Construction — Complete SWS construction by September 30, 2002.

MILESTONE ACHIEVEMENT

Number	Milestone Title	Type (TPA/ DNFSB /PI)	Due Date	Actual Date	Forecast Date	Status/ Comments
M-34-06-T01	Initiate K West Basin SNF Canister Cleaning Operations	TPA	08/31/01	3/15/02		Complete
M-34-16	Initiate removal of KW Basin SNF	ALL	11/30/00	12/7/00		Complete
M-34-29	Complete KE Basin and KW Basin facility modifications for AFTS casks transportation system	TPA	3/31/02		06/01/02	Late delivery of transfer system design and equipment, and unforeseen underground conditions at both basins.
M-34-12-T01	Complete construction of SWS	TPA	09/30/02		09/30/02	On schedule
S10-99-950	Select K Basin Pool Decontamination Method	TIP	09/30/02		09/30/02	On schedule. Studies are being performed to select decontamination method.
M-34-17	Initiate KE to KW fuel transfer	TPA	11/30/02		11/30/02	On schedule
M-34-18A	Complete removal of 190 MCOs of SNF from the KW Basin	TPA/ DNFSB	12/31/02		12/31/02	On schedule (Currently 14 MCOs behind schedule. Taking actions to recover schedule.)
M-34-08	Initiate full scale KE basin sludge removal	TPA/ DNFSB	12/31/02		12/31/02	On schedule
M-34-27-T01	Complete removal of 244 MCOs of SNF from KW Basin	TPA	5/31/03		5/31/03	On schedule
S09-03-010	Decide treatment path for sodium removal from FFTF	TIP	09/30/03		09/30/03	On schedule
M-34-28	Complete removal of 311 MCOs from the KW Basin	TPA	12/31/03		12/31/03	On schedule
M-34-25-T01	Complete transfer of KE Basin SNF to KW Basin	TPA	5/31/04		5/31/03	On schedule
M-34-18B	Complete removal of all K Basin SNF	ALL 3	7/31/04		7/31/04	On schedule
M-34-10	Complete sludge removal from K Basins.	ALL 3	8/31/04		8/31/04	On schedule

MILESTONE ACHIEVEMENT (CONTINUED)

Number	Milestone Title	Type (TPA/ DNFSB/ PI)	Due Date	Actual Date	Forecast Date	Status/ Comments
M-34-23	Start KE water removal	TPA	9/30/04		9/30/04	On schedule
M-34-09-T01	Complete K Basins rack & canister removal	PI	1/31/05		1/31/05	On schedule
M-34-24	Complete KE Basin Water removal	TPA	9/30/05		9/30/05	On schedule
S06-06-006	Complete K Basin water removal	PI	4/30/06		4/30/06	On schedule
M-34-22	Complete KW Basin water removal	TPA	8/31/06		8/31/06	On schedule
S06-06-004	Complete transition activities for Cold Vacuum Drying (CVD) facility and other facilities	PI	9/30/06		9/30/06	On schedule
S06-06-005	Transfer of K Basins to the River Corridor Contractor	PI	9/30/06		9/30/06	On schedule
S20-10-010	Select technology to prepare SNF MCOs for shipment and demonstrate	TIP	12/30/10		12/30/10	On schedule

NOTE: Above data includes all TPA/DNFSB/Performance Incentive milestones as included in the FH baseline, and provides Contract-to Date status.

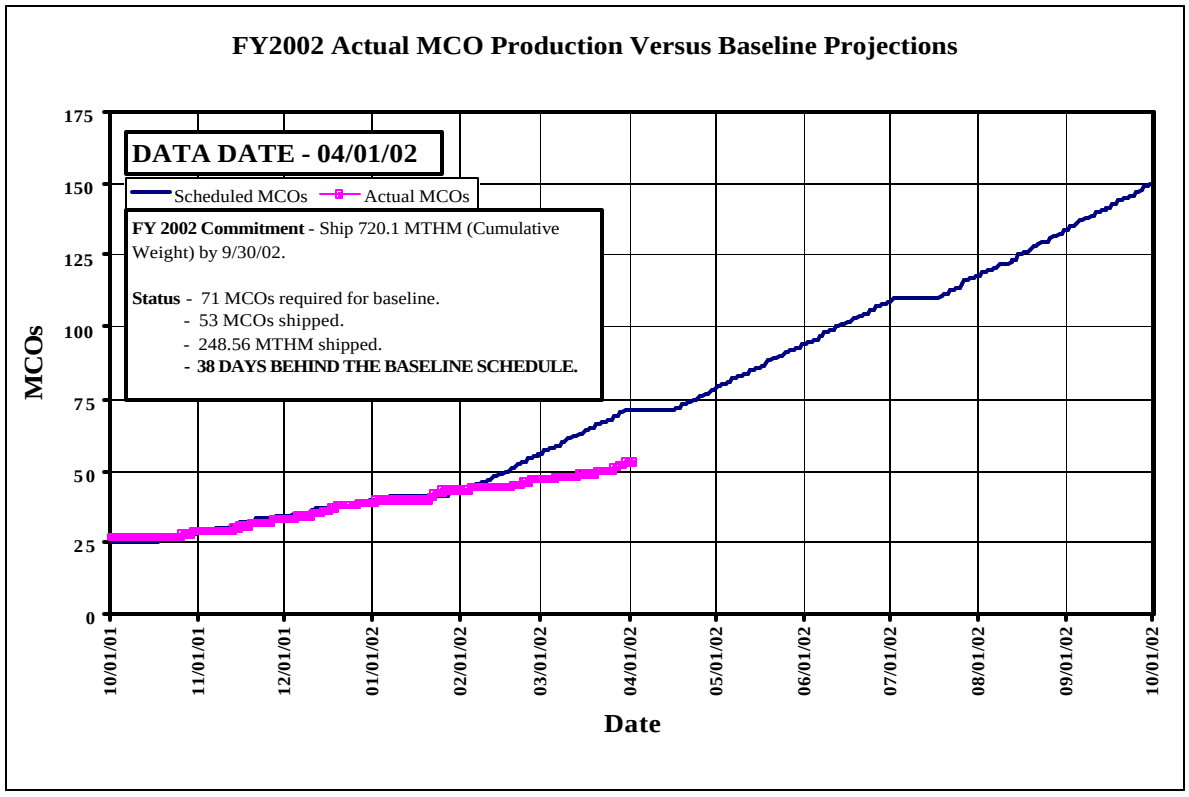
Performance Objectives

Move Fuel Away from the River

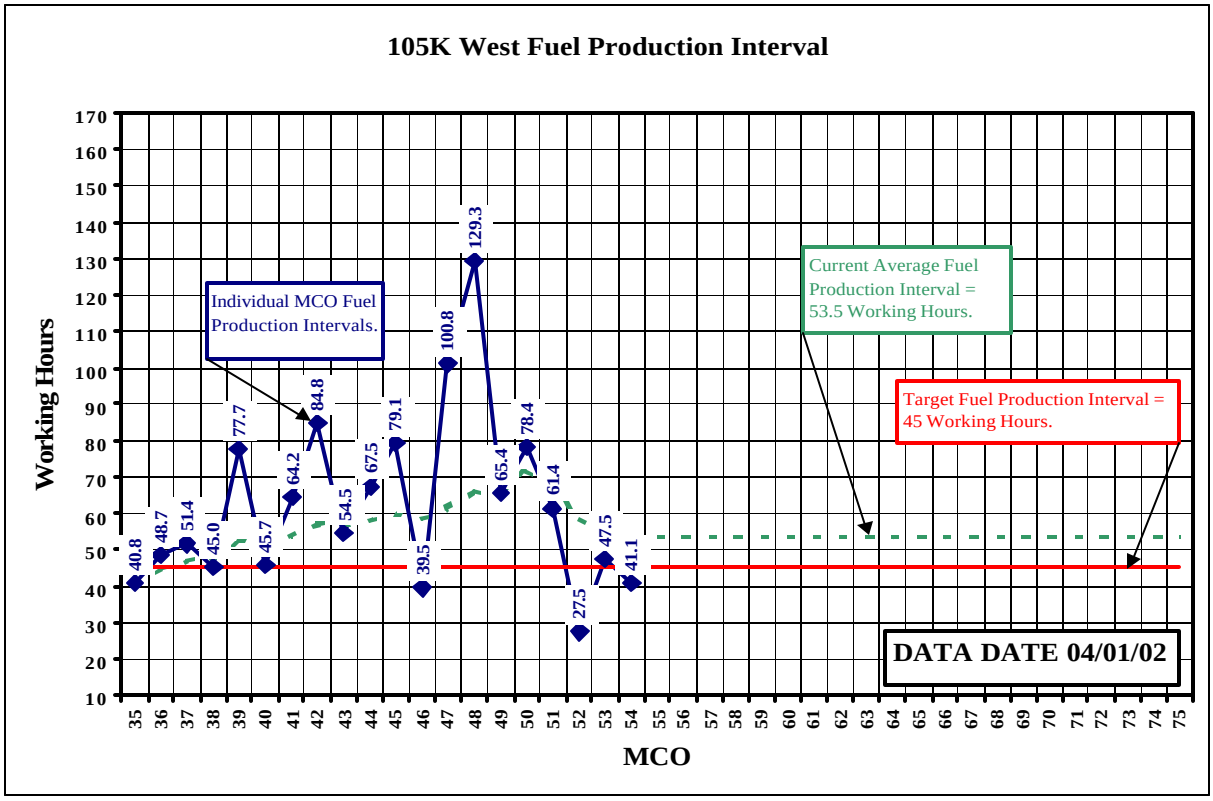
EXPECTATION: Remove spent fuel from K Basins

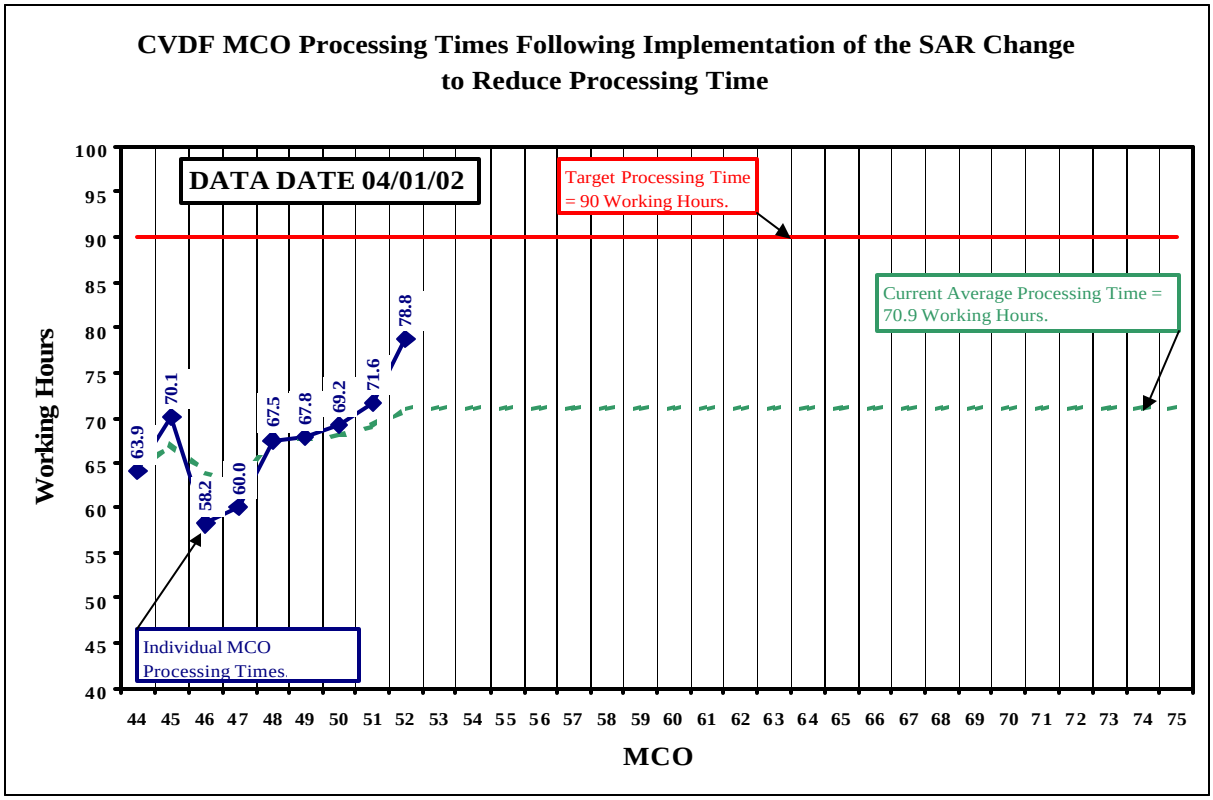
Move 720.1 Metric Tons Heavy Metal from KW Basin by end of FY 2002
Status: A cumulative total of 53 MCOs containing 248.56 MTHM have been shipped. Currently 38 days (18 MCOs, 84.18 MTHM) behind the baseline schedule.

Complete construction on Fuel Transfer System (FTS) by March 30, 2002
Status: Forecast completion of June 1, 2002 due to late delivery of transfer system design and equipment, and unforeseen underground conditions at both basins.

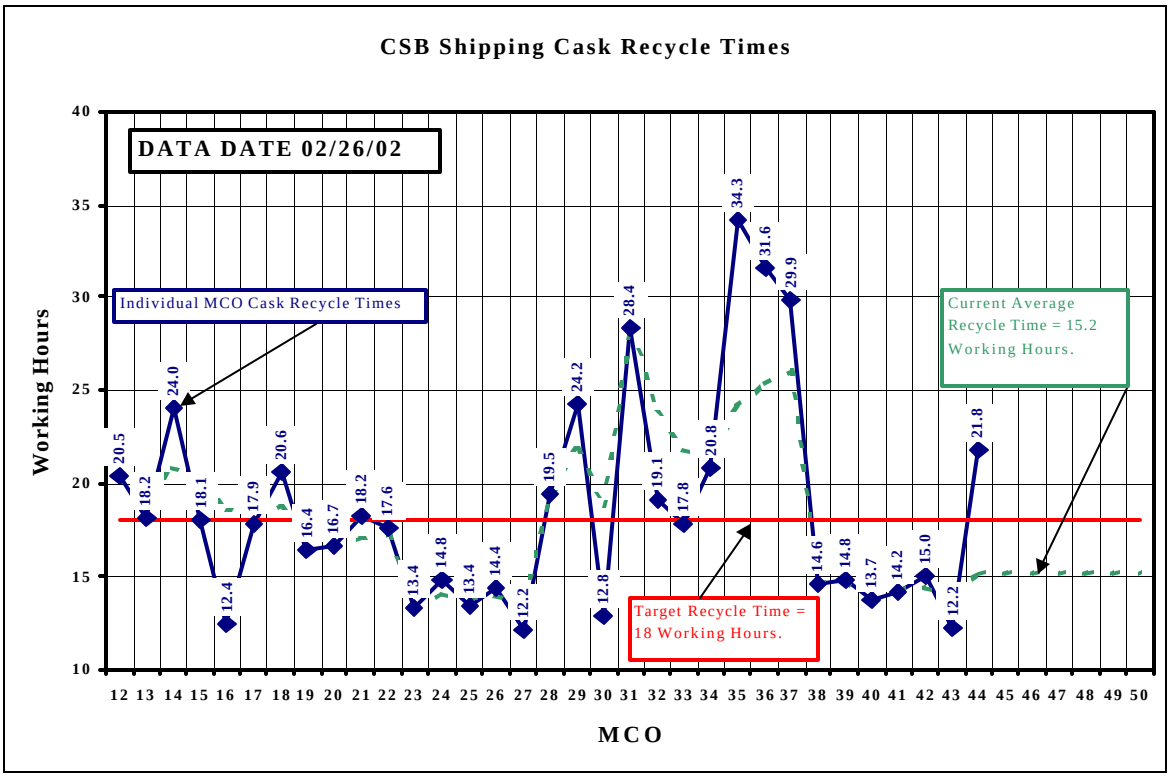


PERFORMANCE OBJECTIVES (CONTINUED)





PERFORMANCE OBJECTIVES (CONTINUED)



SCHEDULE / COST PERFORMANCE – ALL FUND TYPES
FY TO DATE STATUS ($000)

	By PBS	FYTD BCWS	BCWP	ACWP	SV	%	CV	%	BAC
PBS RS03 WBS 3.2.3.1	SNF Project, 100 K Basins	$ 58,180	56334	$ 60,715	$ (1,846)	-3%	$ (4,381)	-8%	$ 117,265
PBS RS03 WBS 3.2.3.2	Canister Storage Building (to2004)	$ 5,012	$ 5,141	$ 4,771	$ 129	3%	$ 370	7%	$ 10,016
PBS RS03 WBS 3.2.3.3	200 Intrim Storage Area (to2004)	$ 1,115	$ 850	$ 712	$ (265)	-24%	$ 138	16%	$ 2,935
PBS RS03 WBS 3.2.3.4	SNF Project Management and Support	$ 19,483	$ 19,334	$ 18,563	$ (149)	-1%	$ 771	4%	$ 41,406
	Total	$ 83,790	$ 81,659	$ 84,761	$ (2,131)	-3%	$ (3,102)	-4%	$ 171,622

FY TO DATE SCHEDULE / COST PERFORMANCE

The SNF FYTD unfavorable schedule variance is primarily driven by the following areas that are behind: FTS construction, SWS engineering, Canister Cleaning and Fuel Removal. The unfavorable cost variance is primarily driven by additional scope in FTS construction/engineering, SWS engineering and procurement, Canister Cleaning and Facility maintenance/operations.

For all active sub-PBSs and TTPs associated with the Operations/Field Office, FYTD Cost and Schedule variances exceeding + / - 10 percent or one million dollars require submission of narratives to explain the variance.

Schedule Variance Analysis: (-$2.1M)

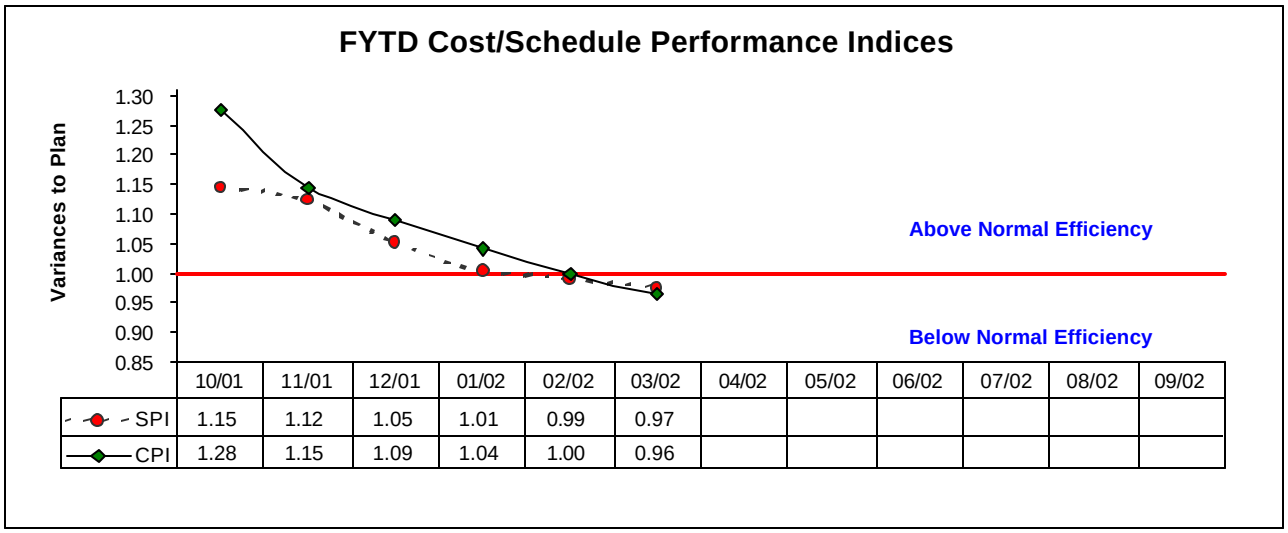
3.2.3.3 200 Area Interim Storage (-$.3M)
Description /Cause: The unfavorable 24 percent schedule variance is primarily due to delays in the transfer of Pressurized Water Reactor (PWR) core fuel.
Impact: None to report.
Corrective Action: None required.

Cost Variance Analysis: (-$3.1M)

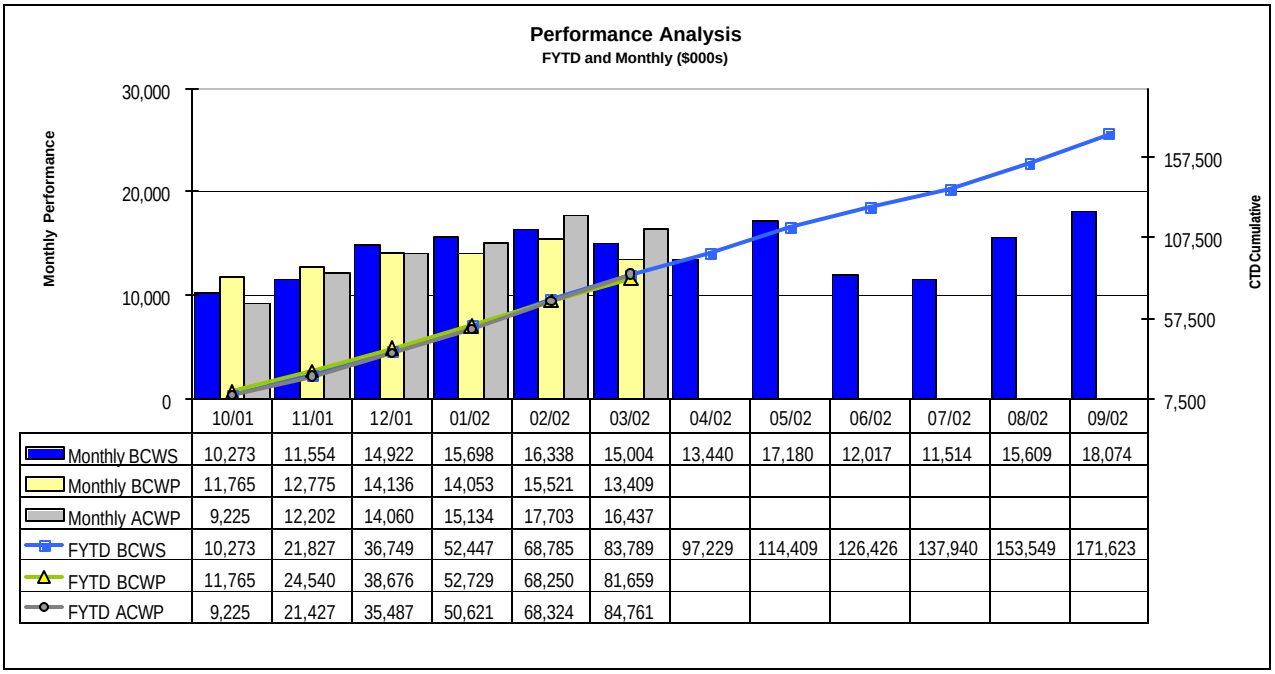
3.2.3.1 SNF Project, 100K Area (-$4.4M)
Description /Cause: The unfavorable 8 percent schedule variance is primarily due to emergent work in FTS and SWS.
Impact: None to report.
Corrective Action: None required.

3.2.3.3 200 Interim Storage Area (+$0.1M)
Description/Cause: The favorable 16 percent cost variance is primarily due to underruns for good performance.
Impact: None to report.
Corrective Action: None required.

Schedule / Cost Performance (Fiscal Year to Date and Monthly)



	10/01	11/01	12/01	01/02	02/02	03/02	04/02	05/02	06/02	07/02	08/02	09/02
SPI	1.15	1.12	1.05	1.01	0.99	0.97						
CPI	1.28	1.15	1.09	1.04	1.00	0.96						



	10/01	11/01	12/01	01/02	02/02	03/02	04/02	05/02	06/02	07/02	08/02	09/02
Monthly BCWS	10,273	11,554	14,922	15,698	16,338	15,004	13,440	17,180	12,017	11,514	15,609	18,074
Monthly BCWP	11,765	12,775	14,136	14,053	15,521	13,409						
Monthly ACWP	9,225	12,202	14,060	15,134	17,703	16,437						
FYTD BCWS	10,273	21,827	36,749	52,447	68,785	83,789	97,229	114,409	126,426	137,940	153,549	171,623
FYTD BCWP	11,765	24,540	38,676	52,729	68,250	81,659						
FYTD ACWP	9,225	21,427	35,487	50,621	68,324	84,761						

FUNDS MANAGEMENT – FY 2002 TO DATE
FUNDS VS SPENDING FORECAST ($000)

	FH Funds Reallocation	FYSF	Variance
3.2.3 Spent Nuclear Fuel			
RS03			
Project Completion - Operating	**$ 177,894**	**$ 179,494**	**$ (1,600)**
			0
Total	**$ 177,894**	**$ 179,494**	**$ (1,600)**

ISSUES

Technical Issues

Issue: Pre-existing conditions and equipment fabrication at KE and KW have held up design and construction at the annexes.

Impact: Impact to Milestone M34-29, due March 31, 2002, and project cost.

Corrective Action: Annexes are nearly complete. Lift table and straddle carriers to be received by May 8, 2002. Completion is planned for June 1, 2002.

Issue: Equipment reliability continues to be a major concern for sustaining fuel movement.

Impact: Continued equipment failures may negatively impact meeting fuel movement commitments.

Corrective Actions:

- Developed detailed schedules and scopes for 100 percent of items requiring upgrades, re-design work.
- Ninety-five percent of the management assessment action items that require spares have been integrated into SNF spares program.
- Sixty-one percent of the management assessment action items are complete with the recommendations having been implemented.

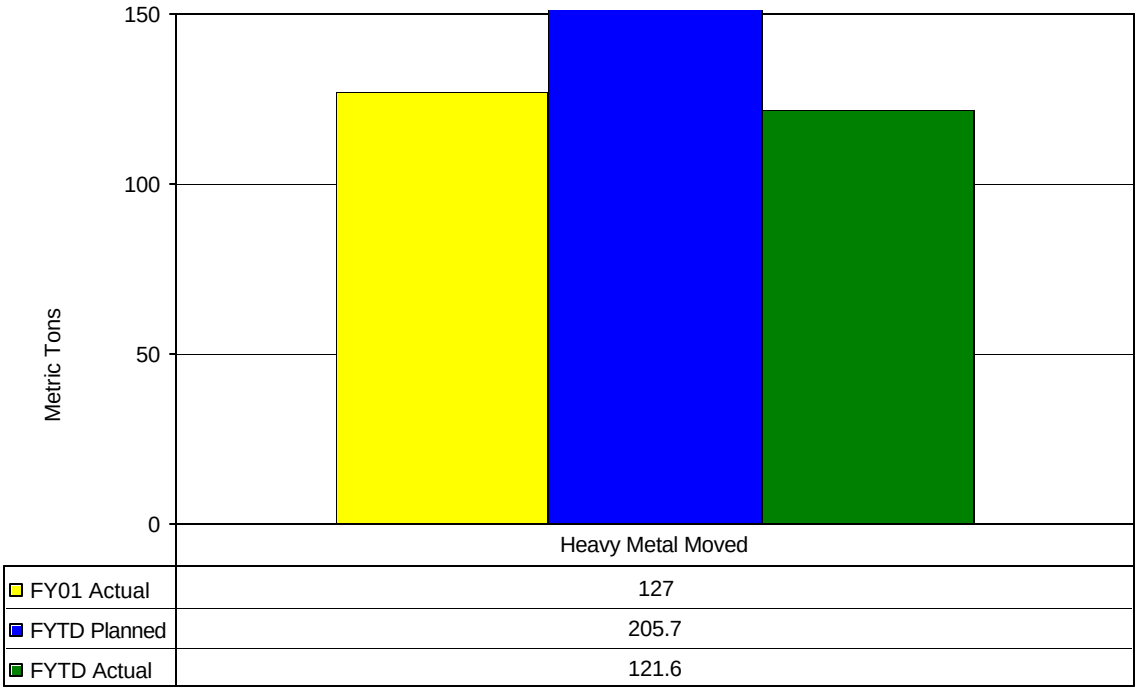
Regulatory, External, and DOE Issues and DOE Requests

None to report.

BASELINE CHANGE REQUESTS CURRENTLY IN PROCESS

None to report.

HEAVY METAL MOVED



	Heavy Metal Moved
FY01 Actual	127
FYTD Planned	205.7
FYTD Actual	121.6

Heavy Metal Moved: Equipment problems have resulted in lower production rates than planned. Present production rates are within production objectives.